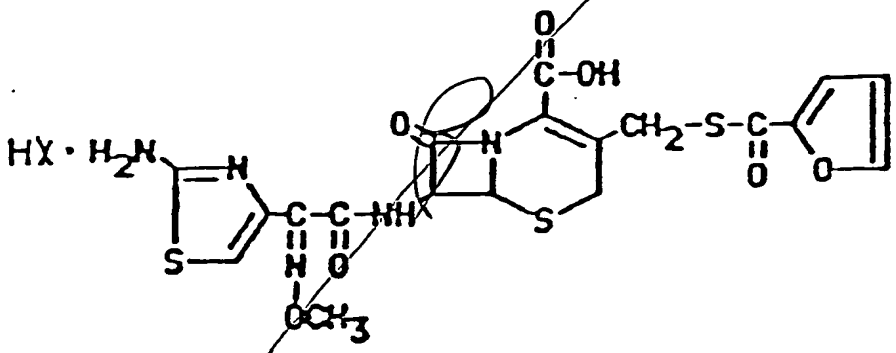
CLAIMS

1. A crystalline cephalosporin hydrohalide compound of the formula



(1)

where X is chloride or bromide.

2. A compound according to Claim 1 where X is chloride.

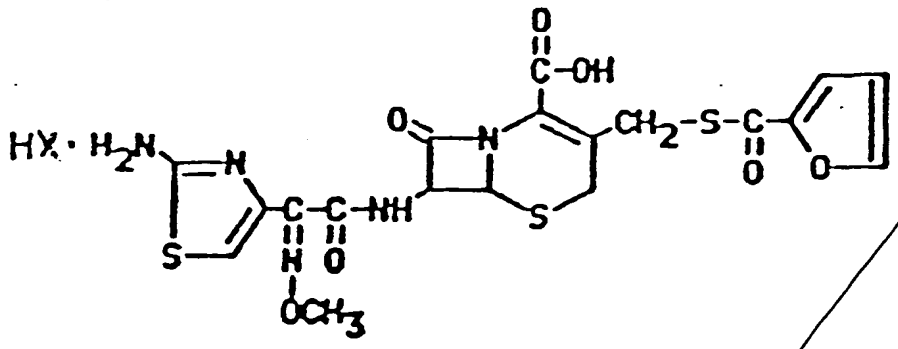
3. A compound according to Claim 14 which has the following x-ray powder diffraction pattern when crystallized from an acetone/water mixture.

interplanar d-spacings A	intensity (relative %)
18.4	44.2
12.4	73.1
8.26	50.0
7.82	100.0
7.69	17.9
6.19	48.1
5.86	32.1
5.21	23.1
5.12	40.4
4.74	30.1
4.37	21.8
4.23	13.5
3.98	26.9
3.91	35.9
3.81	17.9
3.30	14.1

3.01 12.8

2.88 14.1

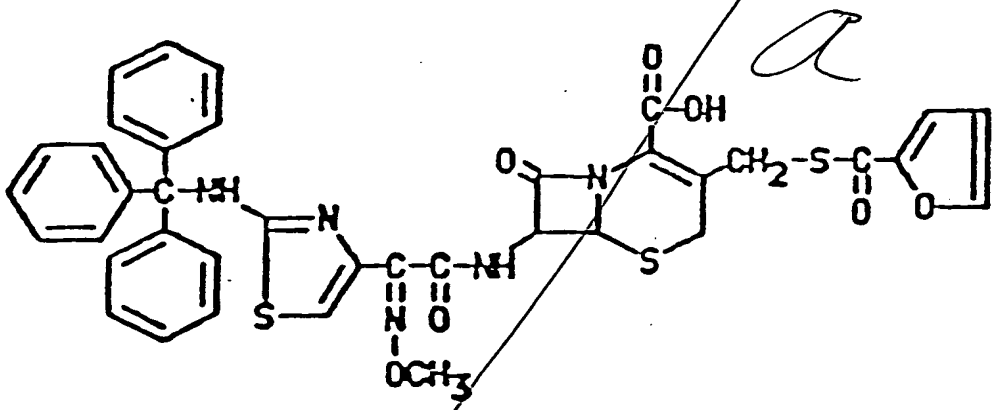
4. A process for preparing a crystalline cephalosporin hydrohalide salt of the formula



(1)

where X is chloride or bromide, which comprises the steps of

(a) treating the N-tritylamino cephalosporin compound of the formula



(3)

with a solution of a polar organic solvent and water and hydrogen halide, where halide is chloride or bromide, in an amount which is at least stoichiometrically equivalent to the amount of the N-trityl compound (3) in the mixture,

(b) heating the mixture from step (a) to a temperature and for a time sufficient to effect detritylation,

(c) decreasing the concentration of the polar organic solvent in the aqueous phase of mixture from step (b) to effect formation of crystalline cephalosporin hydrohalide salt (1),

(d) separating the crystalline cephalosporin hydrohalide salt from the slurry mixture from step (c)

(e) washing the separated crystalline cephalosporin hydrohalide salt from step (d) with water and polar organic solvent, and drying the washed crystalline cephalosporin hydrohalide salt from step (e).

5. A process according to Claim 12 wherein the crystalline cephalosporin hydrohalide salt of Formula 1 being prepared is the hydrochloride salt.

6. A process according to Claim 5 wherein in step (c) of the process, toluene is used as the non-polar, water immiscible organic liquid to separate by-product trityl alcohol and to decrease the quantity of the polar organic liquid in the aqueous phase of the mixture.

7. A process according to Claim 5 wherein step (c) of the process heptane is used as the non-polar, water immiscible organic liquid to separate trityl alcohol by-product and the mixture is distilled to remove polar organic liquid therefrom to enhance formation of the crystalline cephalosporin hydrochloride.

8. A pharmaceutical composition useful in pharmaceutically effective dosage unit form for alleviating the effects of undesired bacterial infections in warm-blooded mammals which comprises a compound according to Claim 1 in combination with a pharmaceutically acceptable carrier.

9. A composition according to Claim 8 wherein the compound is ceftiofur hydrochloride.

10. A method for alleviating the effects of undesired bacterial infections in a warm-blooded animal which comprises administeristering to an animal suffering such a bacterial infection an effective amount of a compound of Claim 1 in a pharmaceutically acceptable dosage unit form.

11. A method according to Claim 10 wherein the active compound is ceftiofur hydrochloride.